DOCUMENT RESUME

ED 176 211 CS 004 941

AUTHOR Gil, Doron; And Others
TITLE Defining Reading Diagnosis: Why, What, and How? Research Series No. 46.
INSTITUTION Michigan State Univ., East Lansing. Inst. for Research on Teaching.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE [79]
CONTRACT 400-76-0073
NOTE 25p.
AVAILABLE FROM The Institute for Research on Teaching, 252 Erickson Hall, Michigan State University, East Lansing, Michigan 48824 ($2.00)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Diagnostic Teaching; *Educational Needs; Elementary Secondary Education; Etiology; *Individualized Instruction; Reading Centers; Reading Consultants; *Reading Diagnosis; *Reading Difficulty; Reading Skills; Reading Tests; *Remedial Reading

ABSTRACT

The literature on reading diagnosis deals with three major issues: the purpose of diagnosis, its content, and its methods. The purpose of reading diagnosis is threefold; it is necessary for the early identification of reading problems; it is prerequisite for remediation; and it is essential for the planning, modification, and individualization of instruction. Diagnoses focus on the areas of skill performance and causes of reading difficulties. Diagnoses are carried out on a continuing basis at one of three levels corresponding to the severity of the reading problem: classroom, school, and clinic. A discussion of what constitutes effective diagnosis and remediation and how these should be conducted is missing from the literature. A model of effective diagnosis could include the above elements. There is also a need for a description of the diagnostic process in terms of the mental tasks performed by the diagnostician. (MKM)

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ED176211

Research Series No. 46

DEFINING READING DIAGNOSIS: WHY, WHAT, AND HOW?

Doron Gil,
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Published By

The Institute for Research on Teaching
252 Erickson Hall
Michigan State University
East Lansing, Michigan 48824

The work reported herein is sponsored by the Institute for Research on Teaching, College of Education, Michigan State University. The Institute for Research on Teaching is funded primarily by the Teaching Division of the National Institute of Education, United States Department of Health, Education, and Welfare. The opinions expressed in this publication do not necessarily reflect the position, policy, or endorsement of the National Institute of Education. (Contract No. 400-76-0073)

CS806701

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Defining Reading Diagnosis: Why, What, and How?

Doron Gil,
John F. Vinsonhaler, and George Sherman[1]

This paper is a review of the literature on the diagnosis of reading problems. The prime objective of the review is to identify the views held by educators about reading diagnosis.

Basically, the literature seems to address three major questions: (1) Why is it important to conduct a diagnosis of reading problems? (2) What constitutes a diagnosis? and (3) How should a diagnosis be carried on?

Why Diagnose?

Three reasons for conducting diagnoses can be found in the literature:

1. Diagnosis is essential for early identification of reading problems;
2. Diagnosis is a prerequisite for remediation; and
3. Diagnosis is necessary for the planning, modification, and individualization of instruction.

Early Identification of Reading Problems

Many educators acknowledge the negative effects that reading deficiencies have on the individual child. Since reading is a prerequisite to most learning, an inability to read can interfere with the child's general

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[1] Dorol Gil is a research intern with IRT's Clinical Studies Program. John F. Vinsonhaler is coordinator of that same project and a professor of educational psychology. George Sherman is also a member of that project and an assistant professor in elementary and special education.

learning, and may lead to failure in school (Wilson, 1977). Moreover, the fear of failure tends to become aggravated as the child grows older (Reich, 1962) and emotional problems are created: tension, anxiety, frustration, short attention span, limitations on ability to do independent work (Smith, Carter, & Dapper, 1970). These problems, in turn, might seriously impair the individual's personal development and behavior (Medrano, 1977; Whitcombe, 1961), and influence his/her ability to function in society (Rutledge, 1969). Since reading seems to be such an important act, then, the need for early identification of reading problems is obvious (Kennedy, 1971). Early diagnosis is necessary to determine whether or not a problem exists and, if so, what its specific nature is.

Some educators argue that it is essential for reading difficulties to be detected and corrected as early as possible so that the problems will not intensify (Sheldon, 1965; Bond & Tinker, 1967; McCarthy, 1971; Rabinovitch, 1965). "The earlier the problems are discovered, the more hope there is for conquering them" (Smith, 1969, p. 15).

Early identification and prevention are important for another reason: there are not enough reading specialists to accommodate all children with reading difficulties. Hence, it is necessary to identify minor problems early enough to give the classroom teacher a chance to remediate them (Gallant, 1970). If this were done, only a relatively small number of children would have to be referred to reading specialists, who would have time to treat them (Wilson, 1977).

A Prerequisite for Remediation

Early identification of reading problems is not an end in and of itself; it must be followed by an appropriate and effective remediation. To be effective, the remediation should correspond to the diagnosis.

The diagnosis should identify the specific skills a student lacks (Carter & McGinnis, 1970; Otto, McMenemy, & Smith, 1973; Rabinovitch, 1965; Smith, 1969; Smith, Carter, & Dapper, 1970), and the remediation should focus on these deficiencies.

Unfortunately, the literature appears to overlook an issue of prime importance: the *precision* of the diagnosis. Precision relates to the level of specificity the clinician chooses for examining skills or causes, that is, the components necessary for good reading and the factors affecting reading problems: task, learning, and the child, itself. In our judgment, the key question is not whether diagnoses should be conducted, but rather, how precise the diagnosis must be to lead to effective remediation. This question, in turn, raises the following questions: (1) What exactly should be diagnosed, reading performance or skills which are absent? and (2) How significant is precision? Should the specialist diagnose the causes of reading failure, the environmental conditions in which the failure occurs, or both? To answer these questions, it seems necessary to have research evidence of the kind which is lacking -- evidence of the relationship between the precision of diagnosis and the treatment.

Answers to the precision questions also require a *model of reading and learning* (Sherman, Vinsonhaler, & Weinshank, Note 1). Such a model, which does not yet exist in the literature, should explore the various aspects of causality, precision of diagnosis, and treatment decisions, and should direct research efforts toward investigations of the relationships which might exist among these variables. It should also define the performances that constitute reading behavior; that is, it should (1) identify the major signs of effective or ineffective reading behaviors,

(2) define the processes underlying effective or ineffective reading behaviors, and (3) propose models of process which predict possible changes in signs as they relate to changes in processes (Sherman et al., Note 1).

Planning, Modification, and Individualization of Instruction

The role of reading diagnosis is not limited to problem-identification and remediation. Rather, a diagnosis is also an essential and integral part of total reading instruction and a basic element of all efficient teaching (Otto, McMenemy, & Smith, 1973; Sheldon, 1968; Smith, Carter, & Dapper, 1970). Hence, diagnosis is a preliminary step to sound instruction, and it should guide teachers in the planning, modification, and individualization of instruction, helping them to respond to the needs of groups and individual students (Austin, 1965; Bond, 1970; Bond & Tinker, 1967; Dauzat, 1977; Dietrich, 1972; Farr, 1971; Karlsen, 1976; Olson & Dillner, 1976; Sawyer, 1968; Smith, 1969; Smith, Carter, & Dapper, 1973; and Swalm, 1973).

There is one major drawback with this position: it is based on the questionable assumption that reading clinicians and classroom teachers are indeed capable of diagnosing and remediating reading difficulties. But no research evidence exists to confirm this assumption. On the contrary, the sporadic research reports that do address this question suggest that reading clinicians and classroom teachers are far from qualified to make accurate diagnoses (see, for example, Burnett, 1970; Weule, 1971; Stephens, Note 2).

Recent research efforts by the Clinical Studies Project of the Institute for Research on Teaching also support this claim. The research shows that, when asked to interact with simulated cases of reading difficulties and arrive at diagnostic judgments about the case problems,

teachers tend to disagree with each other. One study indicated that the diagnostic agreement of 10 teachers on a simulated case was very low (Gil, Note 3), and others have yielded similar results (see, for example, VanRoekel & Patriarca, Note 4).

What *Is* a Diagnosis?

Since many educators view diagnosis as an integral part of the teaching-learning process of reading, it seems necessary to look at what constitutes a diagnosis. A review of the literature reveals that "diagnosis" is defined in one of two ways: as a

1. Description of skill performance, or
2. Determination of causality.

Description of Skill Performance

For some educators, a description of skill performance is synonymous with description of the child's reading performance (Wilson, 1977), a description which may include both the child's strengths and weaknesses (C.W. Peters, 1977). Others consider diagnosis a determination of the child's reading achievement level, to be compared with his/her potential (Guszak, 1972). This level can be determined by proposing and testing hypotheses about the child's performance (Spache, 1976).

Still other educators prefer not to examine the general level of a child's reading performance, but to focus on the child's *weaknesses*. For them reading diagnosis means a description of the child's reading deficiencies (Monroe, 1968) or an explanation of the individual's inability to read (Carter, 1970; Carter & McGinnis, 1970).

Determination of Causality

An alternative to the view of diagnosis as a description of skill performance is the view of diagnosis as a determination of causality; that is, an understanding of the factors that have caused the reading problems. Such an understanding, some educators believe, enables the clinician to prescribe appropriate steps for remediation. Some feel diagnosis should identify the nature of the individual's reading difficulties, as well as the conditions that caused them (Harris, 1972; Strang, 1964), while others prefer to concentrate on the causal factors alone (Carter & McGinnis 1970; Monroe, 1968).

The question of causality relates to the precision issue. Since causal factors could be multiple, it would be difficult to know, without a precise diagnosis, the exact nature of the reading difficulty and, hence, its appropriate treatment.

How Should Diagnosis Be Conducted?

If diagnosis is such an important part of teaching and learning, and if it aims at the description of skill performance and the determination of causality, it is necessary to know exactly how it is carried out. A review of the literature shows that some educators feel that diagnosis, to be useful, should be a continuing process (Bond, 1970; Bond & Tinker, 1967; Ekwall, 1976; Otto, McMenemy, & Smith, 1973; Spache, 1976). Some suggest that this process should start even before instruction begins (Sheldon, 1968; Wilson, 1977) and be continued on a regular basis and combined with remediation (Smith, 1969; Smith, Carter, & Dapper, 1970; Strang, 1964). Review of the literature reveals that the question "How" implies two other interrelated questions: Who should conduct the diagnosis? and Where should this process take place?

We have identified three levels of diagnosis:

1. Classroom;
2. School; and
3. Clinical.

Classroom Diagnosis

Classroom diagnosis seems to correspond with the first purpose of diagnosis: early detection of reading problems. The persons primarily responsible for this kind of diagnosis are the classroom teachers, and many educators believe that teachers can, indeed, meet this responsibility, because this type of diagnosis does not usually require the implementation of clinical tests or interaction with individual students. Rather, classroom diagnosis is a group diagnosis (Carter & McGinnis, 1970; Kennedy, 1971; Otto, McMenemy, & Smith, 1973; Smith, Carter, & Dapper, 1970; Wilson, 1977) involving the administration of group tests; as such, it does not even require much time. In addition, classroom diagnosis is an informal process (Smith, Carter, & Dapper, 1970; Wilson, 1977) in which the classroom teacher can observe a group or individual students over a long period of time. Classroom diagnosis can also be characterized as a general diagnosis (Bond & Tinker, 1967) since the diagnostician attempts, through group tests and informal observations, to identify children who are doing poorly in reading compared to other areas. A note of caution is necessary, however. Further research in this area is needed to investigate just how capable classroom teachers are in taking on this responsibility.

School Diagnosis

The concept underlying school orientation toward diagnosis is that the reading difficulties of some students are too serious to be dealt

with solely by the classroom teacher. Although school diagnosis *can* be carried on by the classroom teacher (Otto, McMenemy, & Smith, 1973) it is usually conducted by a reading specialist (Smith, Carter, & Dapper, 1970; Wilson, 1977). Such a diagnosis focuses mainly on skill performance (when the model in use is a skill model). The basic characteristics of school-level diagnosis are entirely different from those of classroom diagnosis; whereas the latter is group-oriented, informal, and general, school diagnosis focuses on the individual (Kennedy, 1971) and is formal, analytical, and specific (Bond & Tinker, 1967); it is specific in that it aims at describing the student's skill performance (Smith, Carter, & Dapper, 1970; Strang, 1969) rather than his/her performance relative to achievement in other areas.

Clinical Diagnosis

Clinical diagnosis of reading difficulties is designed to deal with those severe cases which cannot be handled in a regular school setting. Although part of this diagnosis can be conducted by a school reading specialist, other phases must be carried out by clinicians from various disciplines (psychologists, physicians). Clinical level diagnoses are oriented mainly toward the determination of causal factors. They require an intensive, thorough case study of an individual child, which may involve clinical diagnosis of the child's personality (Strang, 1969). The case study is specific in that it is intended to provide cues to the causes of the child's reading difficulties (Carter & McGinnis, 1970; Kennedy, 1971).

One problem with this kind of diagnosis, however, is that there is no overall model of the relationships between causes of reading failure and their effect on learning. Without such a model, the outcomes of such a

diagnostic investigation are not reliable enough to ensure proper treatment.

Some educators, acknowledging the severity of certain reading problems and their potential negative effects on the individual's learning and growth, recommend an interdisciplinary approach to diagnosis. This approach, they argue, should focus attention on the individual child and his/her learning problems, and should be carried out by professionals from various fields (psychiatrists, psychologists), as well as by educators in various positions in the school system (administrators, principals, reading consultants, and classroom teachers) (Hollingsworth, 1970; Kress, 1965; N.A. Peters, 1977; Smith, Carter, & Dapper, 1970).

In our judgment, however, an interdisciplinary approach will not achieve the outcomes which its advocates claim it will as long as a model of reading and learning is lacking and the precision issue is ignored.

Summary and Critique

The literature on reading diagnosis deals with three major issues: the purpose of diagnosis (Why), its content (What), and its methods (How).

The purpose of reading diagnosis is threefold; it is (1) necessary for the early identification of reading problems; (2) prerequisite for remediation, and (3) essential for the planning, modification, and individualization of instruction. Diagnosis focuses on two areas: skill performance and causes of reading difficulties. Two activities are involved in diagnosis: (1) description of skill performance, and (2) determination of causality. Diagnoses are carried out on a continuing basis at one of three levels corresponding to the severity of the reading problem: (1) classroom, (2) school, and (3) clinic.

Something that seems to be missing from the literature is a discussion of what constitutes effective diagnosis and remediation and how these should be conducted. Different educators express different

opinions about the purpose of diagnosi the content of diagnosis, and the methods of diagnosis. We propose that an effective model of diagnosis should include nine essential elements (see the figure).

With such a model, reading specialists and classroom teachers would be able to apply the specific elements when dealing with individual studens. On the basis of such a model, several strategies for diagnosis could be defined. Classroom diagnosis, fo: example, would involve Elements 1, 4 and 6, and, if possible, Element 3. A school-level diagnosis would involve the same elements and Elements 2 and 5, as well. A clinical diagnosis would primarily be concerned with Elements 4 and 5.

To view diagnosis in such a comprehensive way, and to implement the steps necessary to deal with individual cases, diagnosticians must have a practical model of reading and learning, as we have already suggested.

There is also a need for descriptions of the diagnostic process in terms of the mental tasks performed by the diagnostician. It is one thing to say that diagnosis should be intensive, and another thing to explain, clarify, and understand the way educators may think about and process the information they collect while attempting to arrive at diagnoses. Overall, there is a lack of clarity in the literature on what constitutes a "good" diagnosis and on how an "effective" diagnosis should be conducted.

The need for a model of reading and learning and for the explanation of the diagnostic process in terms of mental tasks call for the employment of clinical trials and follow-up. For all the methods of diagnosis mentioned in the literature, a continuous process of diagnosis and follow-up is essential, so that children will be diagnosed at the

Why Diagnose	What Constitutes a Diagnosis	How to Diagnose
1. Early identification of reading problems	4. Description of skill performance	6. Continuous process
2. Necessary prerequisite for remediation	5. Determination of causality	7. Classroom orientation
3. Essential for planning, modification and individualization of instruction		8. School orientation
		9. Clinic orientation

Figure: A comprehensive model of reading diagnosis: Nine essential elements

increasing levels of expertise, specificity, and intensity which may be needed to remediate their problems.

Finally, we would like to suggest a committee approach to diagnosis. Under such an approach, the diagnosis and follow-up would necessarily be monitored, which would increase the likelihood that all children do, indeed, benefit from the treatment given them.

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